BACKGROUND: SETTING THE CONTEXT

Health of some watersheds in peril

The state of Washington is renowned for its mountain peaks, flowing rivers, ocean beaches and bountiful agricultural production. Another enduring icon of the Evergreen State has been its abundance of fish species, especially salmon.

To survive and thrive, salmon need plenty of cool, clean water and suitable, accessible habitat in our rivers and streams. During the last decade, however, numerous populations have been listed as endangered or threatened under the federal Endangered Species Act.

A ***watershed*** is the area of land that water flows across or under on its way to a river, lake or ocean. It includes all surface fresh water and adjacent estuaries and marine areas. In this report, the terms "watersheds," "basins" and "Water Resource Inventory Areas" are used interchangeably.

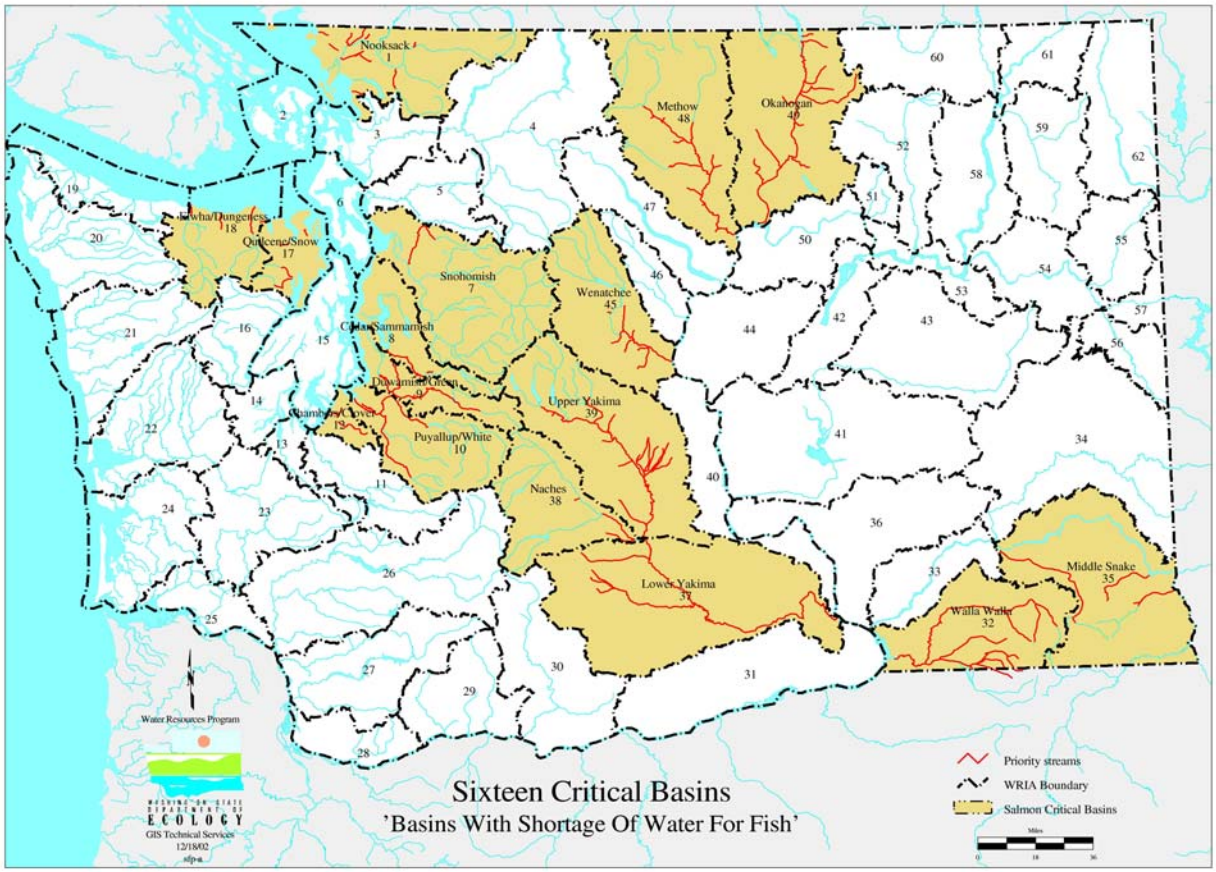
In many Washington watersheds, current water conditions are simply too poor to sustain most life stages of fish. Water withdrawals, impoundments, and land use changes have caused extremely low flows in more than a dozen river drainage systems. In November 1999, the Washington Statewide Strategy to Recover Salmon classified watersheds with shortage of water for fish as critical basins. There are 16 critical basins out of the state's 62 watersheds. The 16 critical basins *(see list and map below)* are also referred to as "over-appropriated," meaning more water has been legally allocated than is naturally available.

Table 1: List of critical basins

Eastern Washington	Western Washington
▪ Lower Yakima	▪ Cedar-Sammamish
▪ Methow	▪ Chambers-Clover
▪ Middle Snake	▪ Duwamish-Green
▪ Naches	▪ Elwha-Dungeness
▪ Okanogan	▪ Nooksack
▪ Upper Yakima	▪ Puyallup-White
▪ Walla Walla	▪ Quilcene-Snow
▪ Wenatchee	▪ Snohomish

In these 16 critical watersheds, the amount of remaining water cannot sustain healthy fish populations. In some places, water can vanish completely. Inadequate stream flows are particularly common in late summer and early fall when human consumption and agricultural demands are at their highest — the same time fish need water for migration, spawning or rearing. Low summer stream flows also raise water temperatures and concentrate pollutants that can harm or even kill fish.

Map – Sixteen critical basins targeted for water rights acquisitions



Water for fish: A fairly recent concept

Prior to 1949, there were no state laws protecting stream flows. For nearly a century, water-right development in Washington occurred with little or no regard for fish and other "instream" uses such as fishing, hunting, boating, swimming and scenic beauty. Under the state rule-making process, instream flows are defined as the amount of water needed in streams and rivers to support aquatic, water quality and other instream values. Since 1949 the legislature adopted key state laws that recognized the need to protect stream flows for fish, including provisions that allow the state to set instream flow levels in rules for rivers and streams within watersheds.

***Salmon** refers to all species of salmon, steelhead, trout and char native to Washington.*

Some watersheds have established instream flows

The Washington Department of Ecology has established 19 instream flow rules. Unfortunately, most major water diversions, reservoirs and other developments such as hydropower facilities occurred well before any instream flows were established. For instance, nine of the fish-critical basins already have instream flows in place. Under state law, however, those established flows are subservient to most existing water rights – the established instream flow rights are junior and may exist only on paper.

***Instream flows** are stream flows set in rule to protect and preserve "in-stream" values and resources.*

In the 16 critical basins as well as other watersheds with chronic low-flow conditions, simply setting new or amending existing instream flows will not increase the amount of water available to support instream functions and beneficial uses. The most important and immediate need is to put water back into rivers and streams to help fish recovery.

Restoring stream flows for fish

Many private organizations and local, state, tribal and federal agencies are interested in working cooperatively to restore instream flows to enhance and maintain fish production. There are several regulatory and incentive-based mechanisms for putting water back into a stream and preventing further flow declines. They include:

- Water right acquisitions through purchases, leases, donations and other means.
- Flow augmentation from water conservation and reuse projects.
- Water releases from existing and new water storage projects, including surface and underground structures.
- Water releases below hydropower projects to protect stream flows.
- Enforcement activities against illegal uses and excessive water waste.
- Stream habitat restoration projects implemented by various watershed groups such as lead entities established under the Salmon Recovery Planning Act.

This strategy focused on restoring stream flows through water rights purchases, leases, donations and other means.

Getting real water through acquisitions

Obtaining water rights through acquisitions is one of the most effective ways to get water when and where it is needed. Water right acquisitions are particularly well-suited for small streams and tributaries, where even adding small amounts in the right reach can be critical. Acquisition opportunities may not be available in all critical basins or in every stream or river within a basin. Other stream-flow restoration efforts are already underway in some of those basins, including putting water conservation and reuse projects in place as well as utilizing water storage facilities to help restore stream flows.

Past and current water rights acquisitions

Ecology began to acquire water rights in 2000 after the legislature established prioritization criteria and provided $1 million to fund a pilot to purchase and lease water rights. Under the pilot, the department leased and acquired water rights in the Walla Walla, Dungeness, Methow and Yakima basins.

Using money from the emergency drought account in 2001, Ecology negotiated 21 water right leases with farmers to keep water in the following fish-bearing streams during Washington's second-worst recorded drought:

- Libbey Creek (Methow watershed)
- Yakima and Teanaway rivers (Upper Yakima watershed)
- Touchet River (Walla Walla watershed)
- Dungeness River (Elwha-Dungeness watershed)

To help fish populations in the Columbia River basin, Ecology also entered into an agreement with the Bonneville Power Administration (BPA), federal Bureau of Reclamation (BOR) and Columbia-Snake River Irrigators Association to take advantage of BPA efforts to address potential power production shortfalls. Under the agreement, BPA paid growers in the Columbia Basin Project to remove 75,000 acres from agricultural production. The action kept extra water in the river during the most critical drought months. Some of the Columbia Basin Project water was made available to downstream irrigators with junior, interruptible water rights.